CLAIMS

1. An electric transmission, especially for a motor vehicle, comprising two electric machines, the shaft (1) of one of the electric machines being connected to a motive power source, this machine converting the mechanical energy to electrical energy, the other electric machine converting the electrical energy to mechanical energy, its shaft (14) being connected to the element to be driven, the rotors (3, 5) of both machines being disposed concentrically or axially relative to one another, these two rotors (3, 5) cooperating with stators whose windings (6, 7) are disposed inside the space defined by the two rotors (3, 5), characterized in that the said windings comprise a plurality of annular windings (6, 7) juxtaposed in the said space, these windings being supplied by alternating currents shifted in phase relative to one another.

2. An electric transmission according to claim 1, characterized in that one (5) of the rotors is mounted to rotate on the shaft (1) of the other rotor (3), and it drives the rotation of a shaft (14) axially offset from the shaft (1) of the first rotor (5).

3. An electric transmission according to one of claims 1 or 2, characterized in that the stator windings (6, 7) are disposed in the annular space between the two rotors (3, 5) and comprise a first annular layer of windings (6) cooperating with one of the rotors, surrounding a second annular layer of windings (7) cooperating with the other rotor, the two annular layers of windings (6, 7) being connected mechanically to one another.

4. An electric transmission according to one of claims 1 to 3, characterized in that each winding (7) is disposed in a core (14a) of ferromagnetic material covered laterally on each side by an end plate (15, 16) of ferromagnetic material provided opposite the rotor with claws engaged between the claws of the end plate situated on the other side of the core (14a).

5. An electric transmission according to one of claims 1 to 3, characterized in that each winding (7) is disposed in a core (14a) of ferromagnetic material covered laterally on each side by an end plate (15, 16) of ferromagnetic material provided opposite the rotor with teeth (18) pointing toward the rotor.

6. An electric transmission according to one of claims 1 to 5, characterized in that each rotor (5) is provided at its periphery with a cylindrical yoke of ferromagnetic material, supporting a series of magnets on its internal face pointing toward the stator windings (7).

7. An electric transmission according to one of claims 1 to 6, characterized in that each rotor (5) is provided on its periphery with a series of ferromagnetic stubs extending opposite the stator windings (7).

8. An electric transmission according to one of claims 1 or 2, characterized in that the annular space between the two rotors (3, 5) is provided with a single series of juxtaposed windings (7).

9. An electric transmission according to one of claims 1 or 2, characterized in that the peripheral surfaces of the two rotors (3, 5) are adjacent to one another and the annular windings (6) of the stator are situated opposite the internal surface of the rotor that is situated inside the other rotor.

10. An electric transmission according to one of claims 1 or 2, characterized in that it comprises a stator (30) composed of a plurality of juxtaposed pancake coils, each provided with an annular winding and supporting on its periphery ferromagnetic claws (15, 16) engaged between the claws of the periphery of the neighboring pancake coil, an intermediate rotor (31) forming an asynchronous cage provided with conductive bars (24) parallel to the axis of the rotor (31) and a series of ferromagnetic stubs (22) situated between the bars (24), this intermediate rotor (31) being surrounded by an external rotor (32) provided with conductive bars (24a) composed of segments parallel to the rotor axis and offset angularly relative to one another and a series of ferromagnetic stubs situated between the bars (24a).